

## Abstract

The present invention relates to a method for continuous preparation of a hydrous zirconia sol dispersed by nanometer-sized spherical hydrous zirconia particles having an average diameter( $d_p$ ) of 1~250 nm, which method comprises supplying the aqueous solution of a zirconium salt at a concentration of 0.001~0.2 mole/l to a reactor consisting of one or more than two reaction tubes, and then irradiating microwave to the stream of the said aqueous solution in the reactor so that the said solution may be heated in a flow state.

Contrary to the method employing a conventional batch-type reactor or semi-continuous stirred-type reactor, the method for continuous preparation of a hydrous zirconia sol according to the present invention can allow various operational parameters to be controlled in a certain range and thus contributes to remarkably improve the quality of a hydrous zirconia sol to be prepared or of the zirconia powder obtainable as a final product.